REMARKS

Claims 1-31 are pending in the application. Claims 14 and 15 have been amended and claim 16 has been canceled herein.

Information Disclosure Statement

The Examiner indicates on form 1449 that WO 00068794 was not considered, but does not give a reason why the reference was not considered. Presumably, the Examiner did not consider this reference because it is a non-English reference.

It is noted that the above-indicated reference was cited in the International Search Report for the corresponding PCT application, and the relevance of this reference was cited therein. Accordingly, the reference should have been considered.

In view of the above, it is respectfully requested that the Examiner consider this reference, and indicate such consideration by issuing a new form 1449.

Claim Objections

Claims 1, 11 and 13 are objected to because these claims use the word "characterised", as opposed to "characterised". It is noted that other claims also included the offending term, but no objection was made to these claims.

All claims using the word "characterised" have been amended to use the term "wherein" so as to better comply with conventional U.S. practice. Thus, the objection is believed to be moot.

Claim Rejections Under 35 U.S.C. § 101

Claims 14-16 stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Claim 16 has been canceled and thus the rejection of this claim is moot. Claims 14 and 15 have been amended to recite that the computer program is stored on a computer-readable medium and, thus, are believed to address the Examiner's concerns with respect to statutory subject matter.

Accordingly, withdrawal of the rejection of claims 14-15 is respectfully requested.

Claim Rejections Under 35 U.S.C. § 112

Claims 1-31 stand rejected under 35 U.S.C § 112 as being indefinite for failing to point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the Examiner states that in claims 1, 17 and 31 it is unclear when the action is performed, if ever, since any determined pointer points to an address within the range of the memory block by including the last new memory location. As discussed below, Applicant respectfully submits that the claims are definite and, therefore, withdrawal of the rejection is requested.

Claim 1 sets forth a method for detecting an error in a persistent memory segment in which values for at least one data item are stored, wherein each new memory location is added to a first end of a block of the memory segment having first and second ends, and a pointer to each new memory location is added to an old memory location in the block containing a preceding value of the at least one data item. In carrying out the method, *the address to which the last-added pointer points is determined.* Then, the determined address is compared with an address range of the memory block that includes the last new memory location (LUM), *and if the determined address is outside the range of the address range of the memory block that includes the LUM, an action is performed.* An exemplary implementation of these features is described below with reference to Fig. 3 (reproduced below).

Fig. 3 of the present application illustrates an exemplary write operation to a memory card 1, wherein three separate write operations are performed to the memory card. During the third write operation, power is removed from the memory card prior to completion of the operation, which can result in corrupt data in the memory card. In accordance with the method of the present invention, such incomplete write operation can be detected as illustrated below. It is noted that in the present example, the erase state of each bit is a "1". A write operation then would change a particular bit or bits from a "1" to a "0".

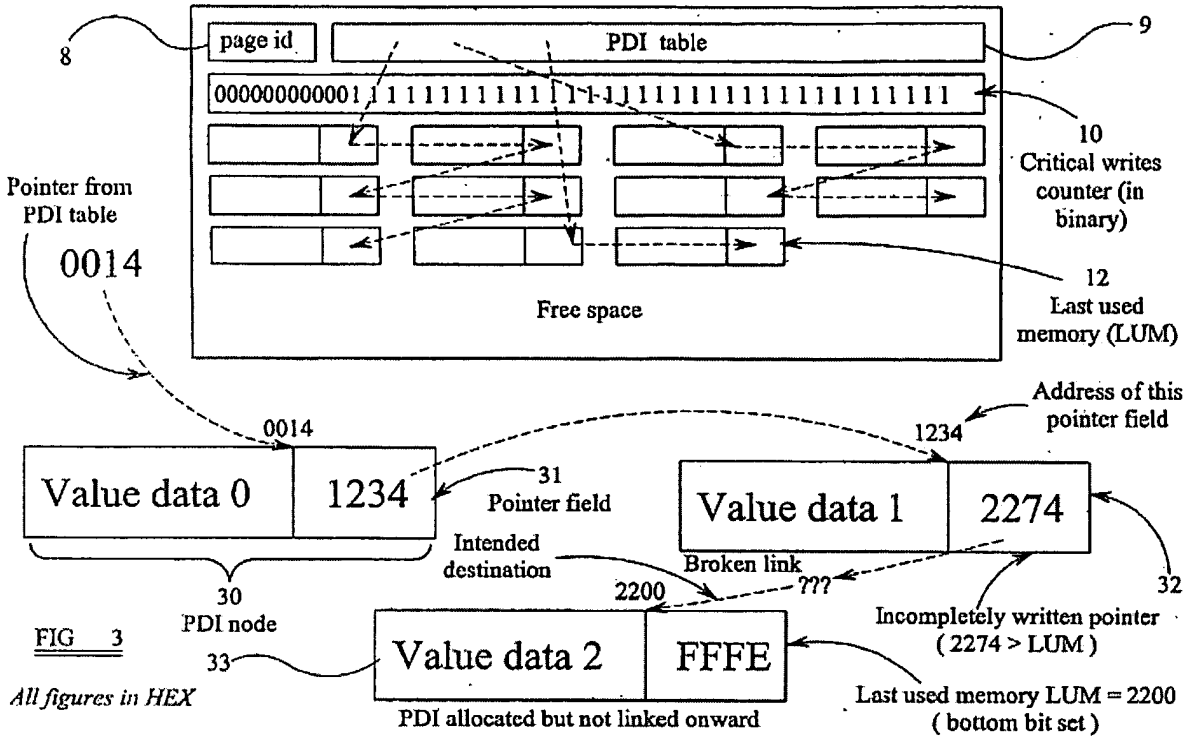

FIG 3

All figures in HEX

During the initial write operation a first value (value data 0) is stored at PDI node 30, and the last word of this node (the pointer field 31) is at address 0014. Additionally, a pointer to the last word of node 30 is stored in the PDI table 9.

During the second write operation for value data 1, the computer 2 finds the pointer for the PDI in table 9 and checks the pointer field 31 to discover that the node 30 contains the immediately preceding value of the PDI. The next value (value data 1) then is written into the value field of node 32 and the address 1234 is entered in the pointer field 31 at node 30, and the counter 10 is updated.

During the third write operation, the computer 2, based on the pointers, determines that node 32 contains the immediately preceding value. The next available space for a node in the memory segment is located and a node is allocated with its pointer field at address 2200. Allocation of the node is performed by changing the lowest bit of the address 2200 to 0, thus leaving FFFE in the pointer field. The value data 2 is stored in the value field of node 33 and the next non-zero bit of the counter 10 is set to 0. A pointer to node 33 then begins to be written into the pointer field of node

32 but prior to completion, power is removed, resulting in an incompletely written pointer (e.g., 2274 is written in the pointer field of node 32).

When power is next applied to the memory card 1, the routine shown in Fig. 4 is performed. This determines that the address field of node 33 is stored at the LUM (which is 2200). This value is compared to the address stored in the pointer field 32 (which is 2274). Since address in the pointer field 32 (which, in the present example, corresponds to the "determined address" of claim 1) is not in the range of the memory block that includes the LUM (in this example, 2274 is not in the range of 2200), it is concluded that the third write operation failed.

In view of the above, it is respectfully submitted that one skilled in the art would readily appreciate and understand the subject matter of claim 1. Similar comments are applicable to claims 17 and 31.

Accordingly, withdrawal of the rejection of claims 1, 17 and 31 is respectfully requested. The remaining claims are rejected for depending on a rejected base claim. In view of the above, withdrawal of the rejection of claims 2-16 and 18-30 is respectfully requested.

Claim Rejections Under 35 U.S.C. § 102

Claims 1-6, 8, 11-13, 17-22, 24 and 27-31 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Publication No. 2001/0007108 (referred to as *Teich*).

Claim 1 sets forth a method that includes determining an address to which the last-added pointer points. This determined address then is **compared** with an address range of the memory block that includes the last new memory location (LUM). In rejecting claim 1, the Examiner states that the above features of claim 1 are disclosed at paragraphs [0062]-[0063]. [0066]-[0067] and [0073] of *Teich*. As explained below, *Teich* has not been found to teach the comparing step and, thus, for at least this reason, the rejection must be withdrawn.

Paragraphs [0062]-[0063] set the stage for a recovery in the system of *Teich*. More particularly, paragraph [0062] describes how the Flag Field of the last appended record is set to active, while paragraph [0063] discloses that a power failure leaves an incomplete chain behind (i.e., a chain where the last record in the chain is not marked as active AND Ptr2 does not point at the same record). In this instance, *Teich* falls back to the fully active previous record. Absent from paragraphs [0062]-[0063] is any teaching that the *address of a last-added pointer is **compared** to an address range of the memory block that includes a LUM.*

Moving now to paragraph [0066], this paragraph discloses a first way that can be implemented to repair a power failure after a particular step. More specifically, *Teich* discloses a method that begins from scratch so as to update all files. Since all previous records hold the old information, a new attempt can be made to synchronously update the files. When new records are appended to the files, the Ptr2 fields are copied to the new records which lead back to the fully active record in each file. No mention is made to "comparing" in paragraph [0066].

Paragraph [0067] describes a second method (i.e., roll forward), wherein all new (current) records in the chain are made fully active, which, according to *Teich*, is more convenient than the method of paragraph [0066]. Again, there is no mention of comparing in paragraph [0067].

Moving now to paragraph [0073], *Teich* discloses that if the new (current) record is active but Ptr2 does not point to the beginning of its own record, Ptr2 is followed to the previous record in the last file. The previous record then is checked to determine if it is fully active and if so, the flag is set to inactive. As is evident, paragraph [0073] also says nothing with respect to *comparing the address of a last-added pointer to an address range of the memory block that includes a LUM.*

None of the paragraphs cited by the Examiner disclose *comparing the determined address (the address to which the last-added pointer points) to an address range of the memory block that includes a LUM*, as recited in claim 1. For at least this

reason, the Examiner's rejection does not support that *Teich* anticipates claim 1. Similar comments are applicable to claims 17 and 31.

Claims 2-6, 8, 11-13, 18-22, 24 and 27-30 depend from claim 1 or 17 and, thus, can be distinguished from *Teich* for at least the same reasons.

Accordingly withdrawal of the rejection of claims 1-6, 8, 11-13, 17-22, 24 and 27-31 is respectfully requested.

Claim Rejections Under 35 U.S.C. § 103

Claims 7, 9, 10, 23, 25 and 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Teich* in view of Applicant's Admitted Prior Art (AAPA) within U.S. Publication 2006/0143541 (referred to as *Kay*). Withdrawal of the rejection is respectfully requested for at least the following reasons.

As discussed above, independent claims 1, 17 and 31 are believed to be novel over *Teich*. Further, *Kay* has not been found to make up for the deficiencies of *Teich*. Thus, claims 1, 17 and 31 are also patentably distinct over the combination of *Teich* and *Kay*.

Claims 7, 9, 10, 23, 25 and 26 depend from claim 1 or 17 and, thus can be distinguished over *Teich* and *Kay* for at least the same reasons. Accordingly, withdrawal of the rejections of claims 7, 9, 10, 23, 25 and 26 under 35 U.S.C. § 103(a) is requested.

Conclusion

Accordingly, claims 1-31 are believed to be allowable, and the application is believed to be in condition for allowance. A prompt action to such end is respectfully requested.

Should the Examiner feel that a telephone interview would be helpful to facilitate favorable prosecution of the above-identified application, the Examiner is invited to contact the undersigned at the telephone number provided below.

Respectfully submitted,
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